brilliant and glistening, the nerve is flattened, grayish, cloudy and often irregular in outline. When imprisoned by osteo-fibrous material, the nerve may retain its natural rotundity, but has a shrunken appearance within the callus, and presents just beyond it a matty ganglionic swelling analogous to nerve-proliferation in the stump of an amputated limb. The nerve in this instance has the general appearance of a little fibrous cord. The histological manifestation is similar to that resulting from division of a nerve, with this exception: all the fibres in the severed ends of a divided nerve undergo simultaneous degeneration. Not so in degeneration due to this osteo-fibrous compression. One fibre after another is attacked. There is a difference in time, but not in kind, in these processes.

Age is an important factor in the regeneration of nerve-tissue, the best results in surgery like the foregoing being obtained in young subjects. Crushing the callus is insufficient to afford relief. It is imperative to cut down on the nerve, expose it to view, find out the exact cause of compression, and remove it speedily. The difficulty of the operation—Esmarch's bandage should always be used—is chiefly due to changes in anatomical distribution caused by the callus itself. To avoid bewilderment and loss of time, a long incision should be made and the nerve first traced somewhere in its course where its position is normal, instead of beginning to follow it at or too near the callus. If the nerve is simply lodged under a fibrous cover, the bistoury will serve to liberate it. But if true bone imprisons it, a portion must be chiseled away. The callus must then be leveled and made smooth.

In certain instances it may be necessary to suture periostial fibres to prevent future implication of the nerve, or to attach the nerve itself to some neighboring muscle. But such necessities have not yet arisen in the author's practice. L. F. B.

ATYPICAL FORMS OF MULTIPLE SCLEROSIS.

The "Progrès Médical" for March 11, 1891, contains Dr. J. M. Charcot's lecture upon the foregoing subject. The symptoms of multiple sclerosis are of both cerebral and spinal origin. Among those of spinal origin are spasmodic paraplegia and intention tremor. Embarrassment of speech, a wandering gaze, nystagmus, vertigo, apoplectiform or epileptoid attacks, etc., are cerebral symptoms. The existence of all these disease manifestations constitutes the classic type of disseminated sclerosis. Other forms exist, presenting conditions less definitely recognized. Chief among these conditions are eye troubles, such as amblyopia and blindness. The optic disk presents an appearance very different from that seen in tabes, there being simple discoloration of the inner border or a yellow dullness, as if the surface were veiled by an indistinct cloud. In tabes, even when syphilitic in origin, drugs are powerless to arrest the fatally progressive blindness. Not so in disseminated sclerosis, the amblyopia and amaurosis being for the most part transitory, owing to the relative integrity of the axis-cylinders that remain to the last in the sclerotic patches. Occasionally guarded prognosis must be given concerning vision, for in exceptional instances its loss has been permanent.

It is well to remember that multiple sclerosis does not belong to the list of fatally progressive and incurable diseases. Its course may be interrupted by remissions, arrests, retrocessions even. These possibilities explain the existence of the disease in atypical forms.

The sclerotic process may impinge upon the anterior horns of the spinal cord, and the cells of these anterior horns, owing to the presence there of axis-cylinders as elsewhere, may continue their function for a longer or shorter period. But the limit of resistance is reached at last, and, in consequence of this destruction, amyotrophia follows. Pain, vesical disturbance and various anæsthesiæ not belonging to the regular picture of multiple sclerosis may then present themselves and give to the case the general appearance of progressive locomotor ataxia.

These atypical forms first came into notice in 1877, when Dr. Pitres published reports of two autopsies of cases that during life had been diagnosticated as transverse myelitis. Spasmodic paralysis had existed; there were sclerotic patches sparsely scattered throughout the cerebro-spinal system in one instance, and in the cord and medulla oblongata in the second. This revelation led the lecturer to state emphatically that multiple sclerosis existed in a third case, in which spasmodic paralysis was then the only symptom of moment on account of an earlier history of vertigo, diplopia, transitory amaurosis and slight trembling of the hands. The autopsy, three months later, confirmed this diagnosis. Spasmodic paralysis, in itself a symptom of small moment, may thus obscure the diagnosis of multiple sclerosis, unless the following factors are taken into account:

I. *Anamnestics.*—Earlier occurrence of vertigo, apoplectiform attack, transient blindness, tremor.

II. *Concomitant signs*, as embarrassment of speech, nystagmus, etc.

III. *Evolution* of the disease, its remissions and special retrocessions.

There are three general classes of anomalous or *fruste* disseminated sclerosis. The first is *fruste* by incompleteness. Spasmodic paraplegia, together with various paralyses, give some objective symptoms of transverse myelitis. There are also primitive *fruste* forms that are such through arrest of development of the disease. Here also spasmodic paralysis is a prominent symptom. Others again, the third class, are *fruste* through the intervention of isolated phenomena.

There are thus three principal varieties of anomalous *sclerose en plaques:* the hemiplegic, the tabetic and the lateral amyotrophic. L. F. B.

SENSORY APHASIA, WITH AUTOPSY.

The "Journal des Sociétés Scientifiques," March 25, 1891, publishes an account of this condition given to the Biological Society by Dr. M. J. Déjérine. The case recorded corresponds to what Wernicke understands and writes about as simple sensory aphasia. There was marked difficulty in spoken language, though Broca's convolution was found intact, which proves the necessity of establishing a distinction between real motor aphasia and paraphasia. There was complete word-deafness, pronounced paraphasia, alexia, agraphia absolute as regards spontaneous writing or writing from dictation. In copying, the patient would draw each letter separately, one after the other, in a very imperfect manner, the letters conveying no meaning to his mind. There was hemianopsia, evidently right-sided, without other visual defect. There was no optic aphasia nor psychic blindness. Hearing was good, also motility and sensibility, and the power of imitation well developed.

At the autopsy there was found a yellow patch on the outer surface of the left hemisphere that extended forward as far as the lower two-thirds of the ascending parietal convolution. These changes confirmed the diagnosis made during life of word-deafness and word-blindness, or sensory aphasia.

The perfect integrity of the auditory centre is essential to the proper function of vocal language. Losing sight of